

# Environmental Quality Fire

Indiana Emergency Response Commission  
2008 Conference

Lt. John White, Apex Fire



# The Town of Apex

- Small North Carolina Town
- Bedroom Community for Raleigh
- Population
  - 2000 Census 20, 212
  - 2007 Estimate 32,000
  - Growing at 3.5 people per day
- Providing Normal Municipal Services





WEST  
VIRGINIA

MARYLAND

KENTUCKY

VIRGINIA

APPALACHIAN MTS.

TENNESSEE

Great Smoky Mts.  
Nat'l. Pk.

Asheville

Kannapolis

Gastonia

Winston-  
Salem

High Point

Greensboro

Durham

NORTH  
CAROLINA

Charlotte

RALEIGH

Greenville

Goldsboro

Fayetteville

Cape Fear

Wilmington

Elizabeth City

Kitty Hawk

Cape  
Hatteras

Cape  
Fear

GEORGIA

SOUTH  
CAROLINA

North  
Atlantic  
Ocean



# Apex Fire Department

- 3 Fire Stations
- Staff
  - 27 Career (at time of EQ)
  - 12 Part Time
  - 15 Volunteers
- 3 Engine Companies, 1 Ladder Company 24 / 7
- Provide Fire, Rescue, EMS, Hazardous Materials
- 66.4 Square Mile District
- 42,000 + with Rural Coverage Area



# The Plan

- Original Plan 20+ years old
- Fire Chief is Responsible for Emergency Management
- December 2002 Electrical Substation Fire
  - Identifies need to review and update plan
  - Identifies first shelter considerations
  - Identifies first Emergency Operations Center



# Initial Revision to Plan

- Fire Department Develops and Implements
- Town Council Approves
- Town Community Center Becomes Shelter
- Station 3 Training Room, New EOC
- Training Begins to the New Plan



# Training

- Unified Command and Control Course
  - three fire personnel trained to teach
- All Fire Personnel Completed UCC
- All Police Completed UCC
- Basic ICS principles initiated on all responses





# National Incident Management System

- July 2005 Fire Chief Requires
  - IS-100, IS-200, IS-700 and IS-800
- Fire Personnel Train Police to same Level
- Public Utilities Trained to IS-100
- ALL Department Heads, Including Town Council
  - IS-100, IS-200 and IS-700



# Another Revision

- May 2006, Town Receives Grant to Re-write Emergency Operations Plan to be NIMS Compliant
- Fire Chief works with Beck Disaster Recovery Group
- New Plan is Approved
- Training and Implementation Begins



# Daily Use of Forms

- Fire Chief Requires Battalion Chiefs to complete the 204 form DAILY
- Begins Familiarization with forms and shows importance
- Completed by 08:30 Daily and Faxed to Sub Stations

1. Incident Name: December 17, 2006		2. Operational Period (Date/Time) From 0745-0800		ASSIGNMENT LIST ICS 204-OS	
3.		4. Division/Group Fire Department			
5. Operations Personnel		Name		Affiliation	
Battalion Chief		Beasley			
Captain		Coats			
Division/Group Supervisor		Maynard, Cirasole (acting)			
6. Resources Assigned This Period "X" indicates 204a attachment with special instructions					
Assigned Company Personnel	OIC	Contact Info. #	# of Persons	Notes/Remarks	
Coats, Bass, Arnett, Bond	Coats	Engine 3	4	Bond (24 hr duty crew)	
Cirasole, Davis, Haraway	Cirasole	Engine 2	3	Haraway out from 11:15-1700	
Maynard, Witmer, Hillen	Maynard	Engine 1	3		
Woody, Cotten	Woody	Ladder 3	2		
Thompson, Silver				(0800-1800)	
Bond			1	(24 hrs)	
7. Assignments					
Station 3: Apparatus checks Engine 3, Ladder 3 Station 2: Apparatus checks Engine 2 Station 1: Apparatus checks Engine 1					
8. Special Instructions for Division/Group					
RT incident planning class 0800-1700					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
Name/Function	Radio, Freq./System/Channel	Phone	Pager		
Emergency communications					
Medical	Evacuation	Other			
10. Prepared By (Resources Unit Leader)			Date/Time		
Battalion Chief Beasley			12/17/2006 0800 hrs		
11. Approved By (Planning Section Chief)			Date/Time		
ASSIGNMENT LIST			June 2000 ICS 204-OS		



# Additional Training

- Late September 2006
- Fire Personnel Trained to Deliver NFA Version of 300 and 400
- Instructors Advised in Class,
  - *“You never know when you might need this”*



# Environmental Quality Company

- Built in 1988 as EnviroChem
- Operated until EQ takes over in 2002
- Permitted as Type I Hazardous Waste Facility
- Governed under Resource Conservation and Recovery Act
  - No Tier II Reporting
- Handled Commercial Hazardous Waste



# October 5<sup>th</sup>, 2006

- Significant date for Town of Apex
- Town Manager and Fire Chief signed contract with Code Red
- Code Red is an Emergency Notification System
  - *“Great idea to implement this incase anything ever happens”*
- Later That Same Day . . . . .









# Odor of Chlorine

- Initial dispatch at 21:38
- Dispatched to an Odor of Chlorine
- Odor Investigations requires 2 Engine Companies and Chief Officer
- Upon arrival of Engine 3, advise a large vapor cloud
- Second Alarm Generated
  - Remaining Engine and Ladder and Mutual Aid Companies



# Car 1 Response

- Normally does not respond
- Got “*That Feeling*” at initial dispatch
- Assumes Command
- Requests County Emergency Management, County Fire Marshall, Raleigh Hazardous Materials Team
- Begins initial Evacuation and initiates Reverse 911



# From Bad to Worse

- Initial Alarm Assignments assigned to evacuations
- Second Alarm Assignment assigned to investigation
- Engine 2 reports Environmental Quality Building
- Within minutes goes from Warehouse on Fire to through the roof
- Engine 2 retreats with victim
- Engine 2 Evacuates Dream Sports
- *COMMAND ORDERS GENERAL ALARM*



# Command Post Moves

- Rapidly Expanding Incident
- Raging Fire and Multiple Explosions
- Haz-Mat Captain *"We're too close!"*
- Command Post moves about 4 blocks uphill
- Winds Change and Continued Explosions
- Command Post moves approximately ¼ mile
- Media has to be moved each time





















HME, INCORPORATED

BATTALION





# Bigger Command Post

- Long Term Response
- Need to be out of the weather
- Need to be away from others and media
- Need a place to meet and plan and work







CITY OF RALEIGH  
FIRE DEPARTMENT

FIRE COMMAND

4



**FIRE COMMAND**



# Formal Command Post

- UNIFIED COMMAND!
  - Fire / Law / EMS / Haz-Mat
- Command Staff Identified
- General Staff Identified
- Accountability?
- Emergency Operations Center
- Not Enough Staff
- Not Enough Room or Resources



# Situation Escalates

- Town Manager and Elected Officials Briefed
- Initial Estimate is to Lose a City Block
- State of Emergency for Apex
- State of Emergency for Wake County
- Career Dissipation Light goes into Overdrive



# Additional Evacuations

- Town Community Center (1<sup>st</sup> shelter)
- Town Hall
- Fire Station One
- Police Department
- Apex Communications (911)
- Fire Station Three (EOC)
- Apex Public Works
- Command is now Town Government









# Additional Considerations

- Air Space Closed 5 Mile Radius
- CSX Railroad Shut Down
- Red Cross Assistance with Shelters
- Civil Air Patrol Requested for Air Ops Branch
- NCDENR Requested for Air and Water Monitoring









AIR TOXICS ANALYTICAL  
SUPPORT TEAM

MOBILE AIR MONITORING  
LABORATORY

NC DIVISION OF AIR QUALITY

THOMAS

136

# Media

- Media Staging Area Established
- Regular Media Briefings
- Media Broadcast Our Message
  - Normal Broadcast STOPPED
  - Evacuations and Shelters
  - How to Shelter in Place
- Murphy to Manteo is now Buxton to Beijing
- Scene Security is Still Critical





# Signs of Exposure

- 13 Police Officers Showing Signs of Exposure
- Vehicle Contamination
- 1 Firefighter Showing Signs of Exposure
  - Is Structural Firefighting Gear Enough?
- Responders go through Decon and Transported
- No Responder Admitted, Everyone is OK!













# Mother Nature

- Low Pressure System Develops
- Causes 180 Degree Wind Shift
- Command Post Must Move an Additional Time
- Media Staging Moves Again
- Causes Evacuation of 100 Bed Nursing Home







EQ

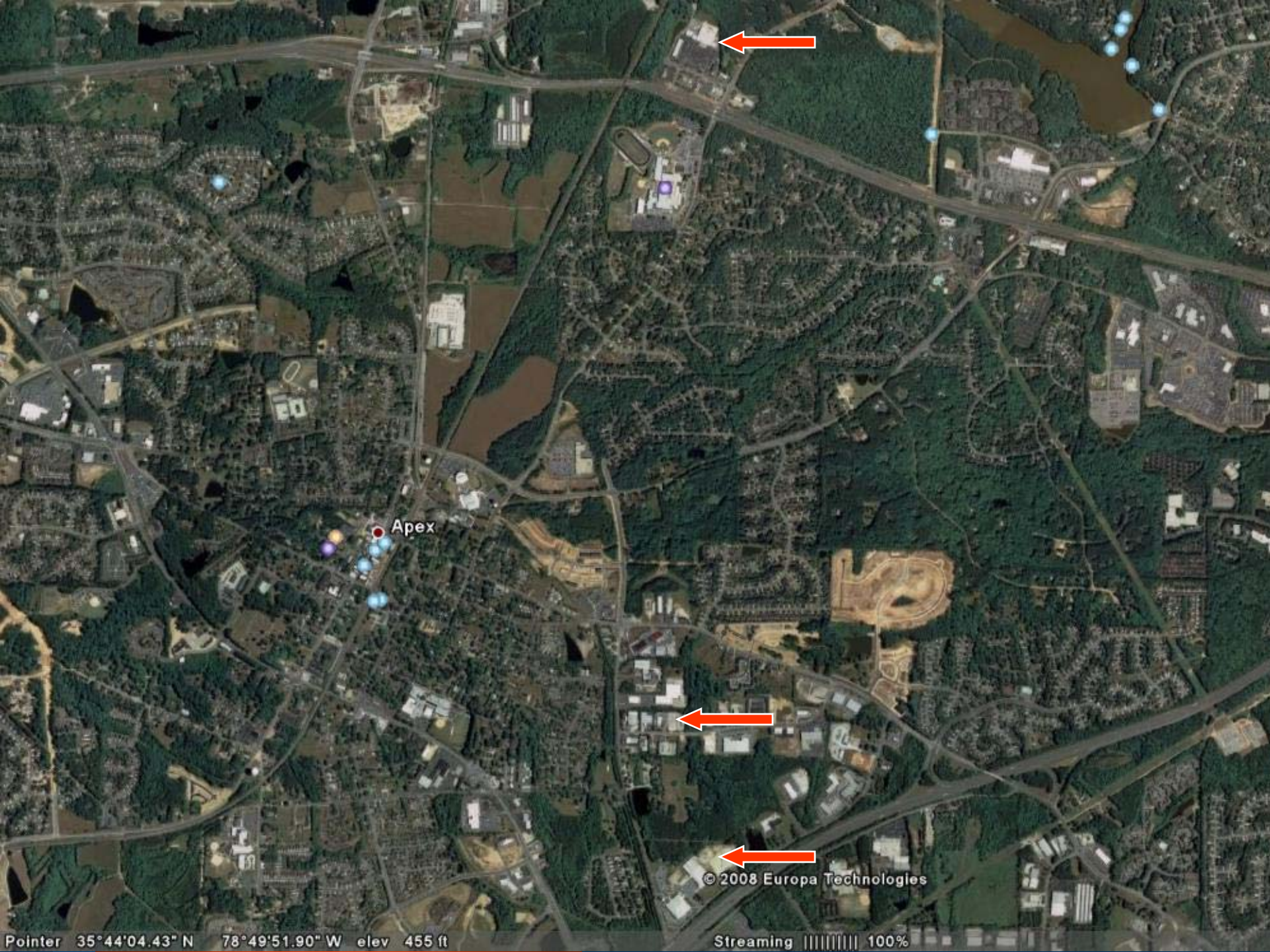




EQ

DOC





Apex

© 2008 Europa Technologies

Pointer 35°44'04.43" N 78°49'51.90" W elev 455 ft

Streaming ||||| 100%





© 2008 Europa Technologies

Pointer 35°44'58.66" N 78°50'07.43" W elev 426 ft

Streaming ||||| 100%











1 HR. P

WYNN-DIXIE

FIRE COMMAND

RALEIGH  
FIREDEPT

CITY OF RALEIGH



1 2 3 4  
5 6 7 8

# SERVICE CENTER

PH





# Nursing Home Evacuation

- Assigned to Medical Branch
- Make Shift Arrangements at Hospitals
- Requires 16 of 32 County Ambulances
- 3 Engine Companies
- Additional Transportation







# Hospital Concerns

- Hospitals Notified Early
- Decon Established Outside Each Hospital
- 2 Engine Companies to Each Hospital for Decon
  - Wake Med Cary
  - Wake Med Raleigh
  - Rex
  - Raleigh Community



# Communications

- Wake County 800 Mhz System
  - 5 Tactical Channels Requested for Fire
  - 2 Requested for EMS
  - Haz-Mat on 800 as well
  - Police not on 800 but at Command Post
- Telephone Calls
  - DHS
  - Governor's Office
  - Other Public Officials



# New Concerns

- Pets?
- Enacted Pet Plan
  - Part of Town Plan
- Focus of Media Briefings
- Red Cross Enacts Pet Friendly Shelters



# Additional Resources

- Federal Government
  - Atlanta EPA Unit
  - ATF
  - CDC
- North Carolina Government
  - NCDENR
  - NCDOL
  - NCEM
  - Crime Control and Public Safety





# Additional Resources

- Environmental Quality
  - United States Environmental Services
  - 2 Industrial Firefighting Teams
- Volunteered Resources
  - Calls to Wake County EOC
  - Food
- Self Dispatched



# Haz-Mat Regional Response

- Haz-Mat Branch Requested RRT
  - Justified Raleigh's Upgraded Response
- First Haz-Mat Team Entry
  - Friday, 10-06-06 about 10:00am
- Samples and Pictures Taken
- 3 Substantial Fires Still Burning





NO  
SMOKING

3 7:40 PM



3 7:52 PM





3 7:59 PM

# Schools Closed

- Schools Closed in Apex
- Wake County School Busses Rerouted
- Shelters Still Occupied
- Shelters Available Until AFTER fires out
- Security and Control Points Major Concern



# Extinguishment Plans

- 4 Foot Containment Around Site for Runoff
  - Public Works Relocated Heavy Equipment
- Operations Requested 800 Pounds of Dry Powder
- Fires Extinguished Using Foam
  - Saturday October 7<sup>th</sup>, 2006 00:38



# Going Back Home

- Approximately 17,000 Evacuated in 4 hours
- Evacuations Start Thursday Night
- First Possible Re-Entry Saturday Morning
- How do you Re-Enter and Not Cause Bottle Neck







# Re-Entry Plan Developed

- Divided Evacuated Areas
- Re-Entry Time for Each Area
- Allowed Time for Control Points to Move
- No Bottle Necks
- Police Maintain Presence on EQ Site for 2+ Weeks







10.06.2006 16:21





10.06.2006 14:57





10.07.2006 15:07





# Start To Finish

- Initial Dispatch:
  - 21:38, October 5<sup>th</sup> 2006
- Police Department Lead Agency
  - 17:00 October 7<sup>th</sup> 2006
- Approximately 17,000 Evacuated
- No Fatalities
- No Evidence of Contamination
- No Criminal Activity During State of Emergency





# Lessons Learned

- Have More Help!
  - Activate ALL Possible ICS Positions
- Improve Communications with IAP's
  - Operational Period Briefings
- More Resources
  - Think Out of the Box
  - GIS for Maps
  - Email IAP to a Local Print Shop for Printing



# Lessons Learned

- Have More Help
  - Relief Personnel for Operational Assignments
  - Relief Personnel for Overhead Assignments
  - Incident Management Teams
- Documentation
  - Track ALL Cost
  - Record All Public Support
  - Scribes (many many scribes)
  - Maintain All Documentation





# Lessons Learned

- Importance of Training
  - Tactical Branch Planning
    - Haz-Mat Branch
  - Advanced Planning
    - Multiple Moves of Command Post
  - Before EQ Many Wondered Why So Much ICS Training
  - After EQ Many Thanked For ICS Training



# We Got Lucky

- Doing Nothing was the Smartest Thing
- Right People in the Right Places was the Key!
- Could Happen Again, Just Not with EQ
- Respond to:
  - Nuclear Power Plant
  - Propane Facility
  - Major Railroad
  - Major Highways



*What Do You Respond To?*



# Additional Information

U.S. Fire Administration/Technical Report Series

## Chemical Fire in Apex, North Carolina

USFA-TR-163/April 2008



**FEMA**

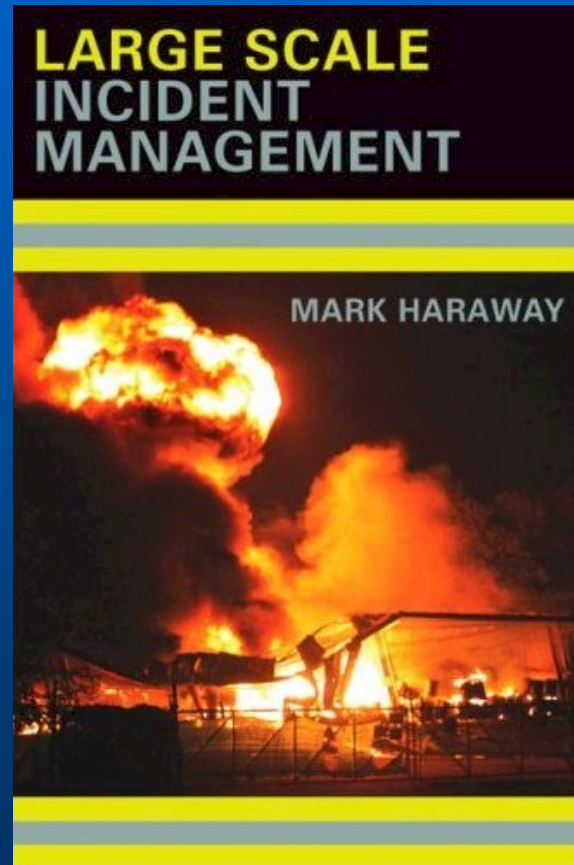




# Additional Information



# Large Scale Incident Management



# THANKS!

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